

EXECUTIVE SUMMARY

This plan was written for use by the Montana Drought Advisory Committee in fulfilling its statutory mandate to take measures appropriate for the mitigation of drought impacts to the people and natural resources of Montana. Experience with past droughts has shown that the most effective approach to accomplish this goal is to coordinate mitigative response actions between state, federal, and local government, and citizen groups in a timely manner. Accordingly, the Montana Drought Response Plan is additionally intended for use by representatives of these entities in addressing problems associated with drought. Appendix G is written specifically for use at the local level with the objective of coordinating responses to drought between government and citizens. The following paragraphs briefly describe the sections of the plan.

INTRODUCTION

The introduction describes the purpose of the Montana Drought Response Plan which emphasizes anticipating, preventing, and mitigating drought impacts. A working definition of "drought" is specified. The guiding philosophy of the Montana drought statute focuses on a proactive, local approach to drought mitigation.

BACKGROUND

This section briefly chronicles the history of drought planning in Montana. It addresses the dry periods that Montana frequently experiences. The state has recorded drought conditions in seven of the last ten years (1984-1994). Recent dry years prompted development of the Montana State Water Plan Section: Drought Management, which is summarized in the background section. In addition, an overview of the state's climatic and topographical characteristics which range from 6 inches of annual precipitation in the southcentral prairies to 120 inches in the northwest mountains is provided.

STRUCTURE AND FUNCTION

This section identifies the membership and responsibilities of the Drought Advisory Committee (DAC) and local drought advisory committees (LDACs). The DAC is responsible for coordinating drought mitigation activities in Montana. Although policy is directed and formulated by state government, LDACs play a pivotal role in drought response since mitigation strategies are most effectively developed and implemented at the local level. The data support subsection lists the names of federal and state agencies which provide information and technical assistance and indicates their respective areas of expertise.

DROUGHT MONITORING

The monitoring and reporting functions provide the DAC and local entities with the information necessary to assess current conditions and to plan appropriate response strategies. This information is given to the local media to inform Montanans about water supplies and moisture conditions. The two primary drought indices used are: The Surface Water Supply Index (SWSI) and the Palmer Drought Severity Index (PDSI). The SWSI projects the surface water supply for the coming month by factoring together mountain precipitation, reservoir storage, and soil moisture. The PDSI is a drought indicator based on measured precipitation, estimated evapotranspiration, and prevailing climatic characteristics. Other factors are examined by the DAC in conjunction with the SWSI and PDSI including the time of year, the prospect of economic or natural resource damage, and deviation from historic norms.

DROUGHT ASSESSMENT

The DAC's member state agencies use the available monitoring data to project the likelihood and possible severity of drought impacts. A "risk assessment" approach generates the most successful drought mitigation strategy. Risk assessment involves the examination of projected worst case impacts to each economic and natural resource sector. The plan describes impact assessment for the following ten economic and natural resource categories: dryland farming, livestock operations, irrigation water supplies, municipal and domestic water systems, fish and wildlife, wildfire, public lands, energy production, tourism, recreation, and secondary commerce.

DROUGHT RESPONSE

The most important function of the Montana Drought Plan is to identify and implement appropriate actions in response to expected or worsening conditions. This section describes the triggering mechanisms for state and county responses. The SWSI and the PDSI form the basis of the "triggering mechanism." The triggering mechanism initiates a two-tiered response system which designates either a drought "alert," or a "severe" level of drought. For each level, the plan recommends various actions for state and county jurisdictions. A drought alert status activates increased monitoring, media announcements, and planning activities. A severe level drought initiates implementation of planned water conservation and drought mitigation and enforcement measures.

STATE, FEDERAL, AND LOCAL RESPONSE ACTIONS

This section builds upon the responses recommended for state and county governments with more detailed and comprehensive actions related to the respective responsibilities and missions of each jurisdiction. It is organized by agency and by "ongoing" or long-term actions, and "drought" or short-term actions. The actions are further divided into an "alert" or moderate level, and "severe" level to correspond with the plan's two-tiered response strategy.

APPENDICES

Appendix A lists the drought-related responsibilities of each agency represented on the DAC consistent with their respective statutory mandates. The lists are referred to as "Annexes" and must be updated following each year to ensure that newly-developed and successful response strategies are preserved in the plan. Appendix B provides a copy of the Montana Water Plan Section: Drought Management. Appendix C identifies stream permits and laws pertaining to activities most often pursued during drought conditions. Appendix D contains DNRC's policy for resolution of water use conflicts and enforcement procedure. Appendix E provides a flow chart and brief narrative of the USDA Natural Disaster Determination Process and Appendix F, a copy of the drought statute from the Montana Codes. Appendix G is an operations manual for local drought management. Appendix H is a copy of a DNRC Water Supply and Moisture Condition Report. This report is the monthly summary of data used by the DAC in monitoring the state's water supply and moisture conditions.